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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,352	02/14/2001	Donald J. Lewis	200-1731	1057

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EXAMINER

TRAN, DIEM T

ART UNIT PAPER NUMBER

3748

DATE MAILED: 01/29/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/783,352

Applicant(s)
Lewis

Examiner
Diem Tran

Art Unit
3748



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-7, 9-11, and 14-21 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-7, 9-11, and 14-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 5-7, 9, 10, 14, 15, 17-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Twigg (US Patent 6,651,424).

Regarding claim 5, 9, 17, Twigg discloses a method of controlling an air-fuel mixture in an internal combustion engine, comprising the steps of:

determining a temperature of a downstream emission control device, said downstream emission control device (10) located following an upstream emission control device (5) (see Figure 1, col. 4, lines 43-49), oxidizing hydrocarbon stored in said downstream emission control device when said temperature of said downstream emission control device is greater than a predetermined temperature by providing an air amount in a location (7) (see col. 3, lines 46-47) following said upstream emission control device (5) and before said downstream emissions device (10) (see Figure 1); and adjusting the air-fuel ratio in the engine rich of stoichiometry during oxidation of said hydrocarbons (see col. 4, lines 39-50).

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Regarding claims 6, 18, Twigg further discloses that oxidizing hydrocarbons is accomplished by providing a sufficiently intermittent air mass to said downstream device (see col. 3, lines 48-50).

Regarding claims 7, 10, 21, Twigg further discloses said air supply device is an air pump (see col. 3, lines 35-39).

Regarding claims 14, 15, 19, 20, Twigg further discloses that said air fuel ratio is adjusted by providing bias to a desired air fuel ratio(see col. 2, lines 58-60).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5, 9, 11, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Mizuno et al. (US Patent 6,029,441).

Regarding claims 5, 9, 11, 17, Mizuno discloses a method for controlling an engine, said engine communicating with a first (12) and second emission control device (10) (see Figure 3) , said method comprising:

determining a temperature of said second emission control device (see col. 10, lines 15-18);

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combusting an air/fuel mixture rich of stoichiometry in an engine cylinder to reduce NO_x stored in said first emission control device (see col. 6, lines 57-61); applying oxygen (16) upstream of said second emission control device (10), to oxidize hydrocarbons stored in said second emission control device and hydrocarbons from said combusted rich air -fuel mixture when said temperature of said second emission control device is greater than a predetermined temperature (see col. 10, lines 13-25).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Twigg (US Patent 6,651,424) in view of Hirota et al. (US Patent 6,367,246).

Twigg discloses all the claimed limitations as discussed in claim 5 above, however, fails to disclose that said air amount is increased as the engine load increases. Hirota teaches that the amount of hydrocarbon adsorbed in the adsorber increases with the increase in the value of engine load (see col. 8, lines 3-9); therefore, one having ordinary skill in the art would realize that the air amount should be increased to oxidize the larger amount of hydrocarbon desorbed from the adsorber due to the increasing of the engine load, so as to improve the efficiency of the regeneration of the hydrocarbon adsorber.

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Conclusion

Any inquiry concerning this communication from the examiner should be directed to Examiner Diem Tran whose telephone number is (703) 308-6073. The examiner can normally be reached on Monday -Friday from 8:00 a.m.-5:30p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (703) 308-2623. The fax number for this group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

DT
January 22, 2004



Diem Tran
Patent Examiner
Art unit 3748



THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700